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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,308	04/01/2004	Thomas Strothmann	12873/04787	7265
24024	7590	06/07/2005	EXAMINER	
CALFEE HALTER & GRISWOLD, LLP			HERNANDEZ, OLGA	
800 SUPERIOR AVENUE			ART UNIT	PAPER NUMBER
SUITE 1400				2144
CLEVELAND, OH 44114			DATE MAILED: 06/07/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/815,308	STROTHMANN, THOMAS	
	<b>Examiner</b>	<b>Art Unit</b>	
	Olga Hernandez	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 24 March 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-3,8-13,17-22,26-29 is/are rejected.
- 7) Claim(s) 4-7,14-16 and 23-25 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 01 April 2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 31705.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Response to Arguments***

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 9-11, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naito 5,168,953 in view of Ando et al (5,388,658).

As per claims 1, 10 and 19, Naito teaches:

- determining a turning reference and vehicle velocity (column 4, lines 62-68 and column 5, lines 1-6);
- determining a reference distance from the turning reference (column 5, lines 20-28);
- determining a wheel drive distance from the turning reference for each wheel drive of the multi-wheel drive vehicle (column 5, lines 25-35).

Naito does not teach determining an independent velocity for each wheel drive based on the vehicle velocity, wheel drive distance, and reference distance, and outputting the independent determined velocity for each wheel drive to each

wheel drive. However, Ando teaches determining an independent velocity for each wheel drive based on the vehicle velocity, wheel drive distance, and reference distance, and outputting the independent determined velocity for each wheel drive to each wheel drive (column 2, lines 11-23, column 3, lines 41-55, column 4, lines 9-19, figures 1, 5 and 6). Thus, it would have been obvious to one skill in the art to combine Naito's invention with Ando's independent velocity for each wheel in order to optimize vehicle performance and to prevent the vehicle from exceeding a predetermined lateral acceleration limit.

As per claims 2, 11 and 20, Naito teaches how to read the position output of a user manipulable control device (column 8, line 20).

As per claims 9, 18 and 27, Naito does not teach the steering angle of at least one wheel drive. However, Ando teaches it in column 3, lines 52-53. Thus, it would have been obvious to one skill in the art to combine Naito's invention with Ando's independent velocity for each wheel in order to optimize vehicle performance and to prevent the vehicle from exceeding a predetermined lateral acceleration limit.

Claims 3, 8, 12, 17, 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naito (5,168,953) in view of Ando et al (5,388,658), further in view of Ikeda et al (5,157,611).

As per claims 3, 12 and 22, neither Naito nor Ando teaches how to read the angular position of a steering servo-mechanism. However, Ikeda teaches it in column 3.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the aforementioned references in order to enhance the vehicle's control.

As per claims 8, 17 and 26, neither Naito nor Ando teaches how to determine the steering angle of for at least one wheel drive. However, Ikeda teaches how to determine the steering angle of for at least one wheel drive (columns 5-6). Therefore, it would have been obvious to one of ordinary skill in the art to combine the aforementioned inventions in order to enhance the vehicle's control.

Claims 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naito (5,168,953) in view of wheelchair's joystick.

As per claims 13 and 21, Naito does not teach the use of a joystick. However, this feature is used in wheelchairs today and it would have been obvious to one of ordinary skill in the art to combine both inventions in order to give different options of comfort to the users.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 28 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikeda et al (5,1157,611).

As per claims 28 and 29, Ikeda discloses how to read an angle value associated to the steering position (column 4, lines 19-20); determine a velocity based on the angle, a vehicle reference point's velocity and location from a predetermined origin, and at least one wheel drive base dimension for at least one wheel drive (column 4, lines 20-45), and output the determined velocity to the at least one wheel drive (column 5, lines 1-15).

### ***Allowable Subject Matter***

Claims 4-7, 14-16, 23-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Hernandez whose telephone number is 571-272-7144. The examiner can normally be reached on Mon-Thu 8:30am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Olga Hernandez  
Examiner  
Art Unit 2144